Volkswagen Cabriolet DIY Guide
Conducting a Tune-up

Table of Contents

Changing the spark plugs 2

Replacing the distributor cap, rotor, and wires ..... Working on it!

Replacing the air filter 5

Replacing the fuel filter
- CIS ..... Working on it!
- Digifant ..... Working on it!

Checking and adjusting idle speed
- CIS ..... Please refer to www.cabby-info.com/Files/CISIdle.pdf
- Digifant ..... Working on it!

Checking and adjusting valves (solid lifter cylinder heads) ..... Working on it!

Replacing the valve cover gasket ..... Working on it!

Every 15,000 miles or 12 months	Every 30,000 miles or 2 years
• Replace/clean air filter • Check valve clearance and adjust if necessary; replace cylinder head cover gaskets • Check idle speed and adjust if necessary	• Replace fuel filter • Inspect distributor cap, rotor, spark plug wires and replace if necessary • Replace spark plugs

Changing the Spark Plugs

Tools needed:

- Socket wrench
- 21mm spark plug socket
- Socket extension
- Torque wrench
- Spark plug wire pliers (optional)
- Spark plug gapper
- Small whisk broom, or air compressor
- Shop-Vac® style vacuum (optional)
- Oil

Parts needed:

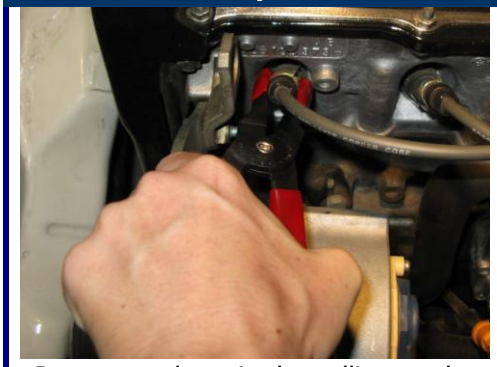
- Four spark plugs (Bosch W7DC or W7DTC, or your preferred equivalent)

BEFORE BEGINNING:

1) Replace the spark plugs one at a time; or
2) Number the plug wires prior to removal.

While each plug wire has its own length making it somewhat clear where each goes, it is still possible to mix the wires up. If you've removed all of the wires without numbering them, upon reinstallation verify their location with the photo at the end of this section.

Step 1

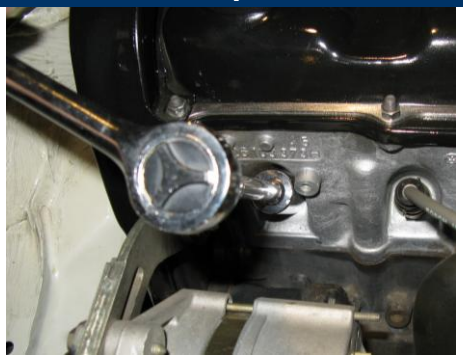


Remove a plug wire by pulling on the protective boot (plug wire pliers used in the photo).

Step 2

Using a small whisk broom or, better yet, an air compressor, remove any debris from around the base of the plug.

Step 3



Using a 21mm spark plug socket and your socket wrench, remove the spark plug. Examine the plug for any abnormal wear (see the end of this section for wear information).

Step 4

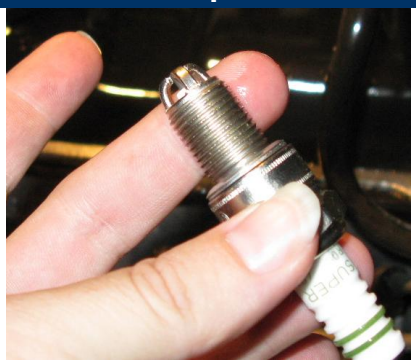
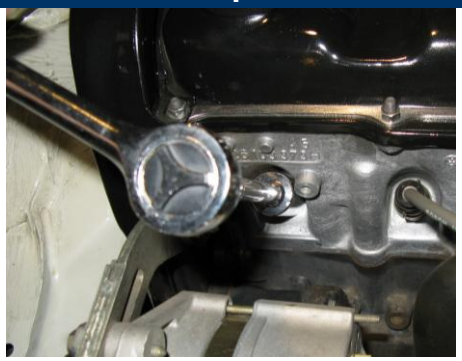
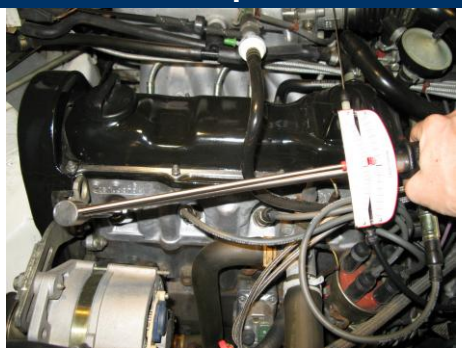
If there is additional debris in or around the plug hole, use your Shop-Vac to remove it.

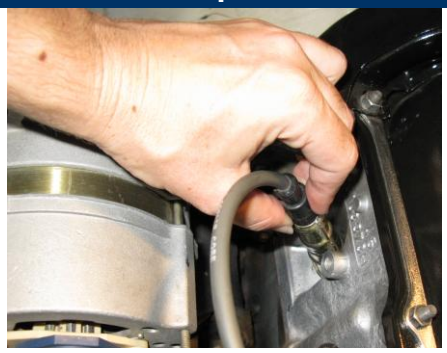
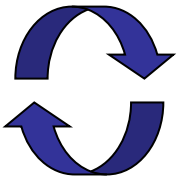
Step 5

Remove a new spark plug from its package. If the plug has a "cap" at the end, unscrew it and toss it in the trash.

Step 6

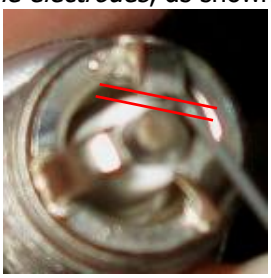
Most spark plugs come pre-gapped; however, you should always check a plug's gap* before installing it. The proper gap is 0.7mm (±0.1mm).

Step 7	Step 8	Step 9
 Lightly lubricate the plug's threads (only the threads!) with a little motor oil.	 Install the new spark plug by hand and/or socket wrench just until it's tight.	 With the spark plug socket on your torque wrench, tighten the plug to no more than 20Nm (15 ft. lb.)

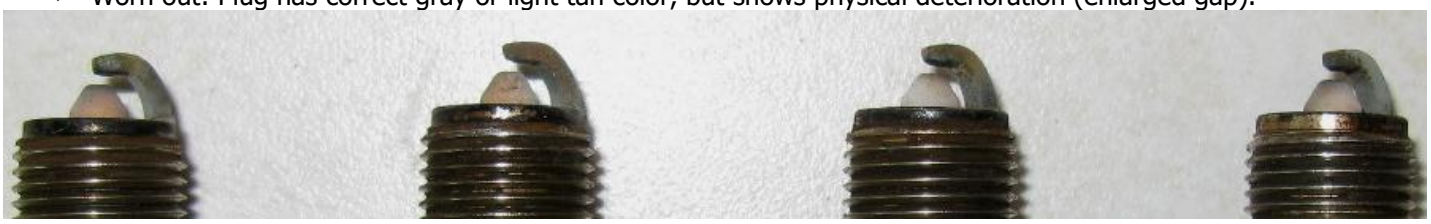
Step 10		
 Reinstall the plug wire by pushing it on the plug by hand until you hear a <pop>, or until the boot is completely seated on the plug.	 Repeat steps 1 through 10 for each of the remaining spark plugs until all four have been replaced.	

*** NOTES:**

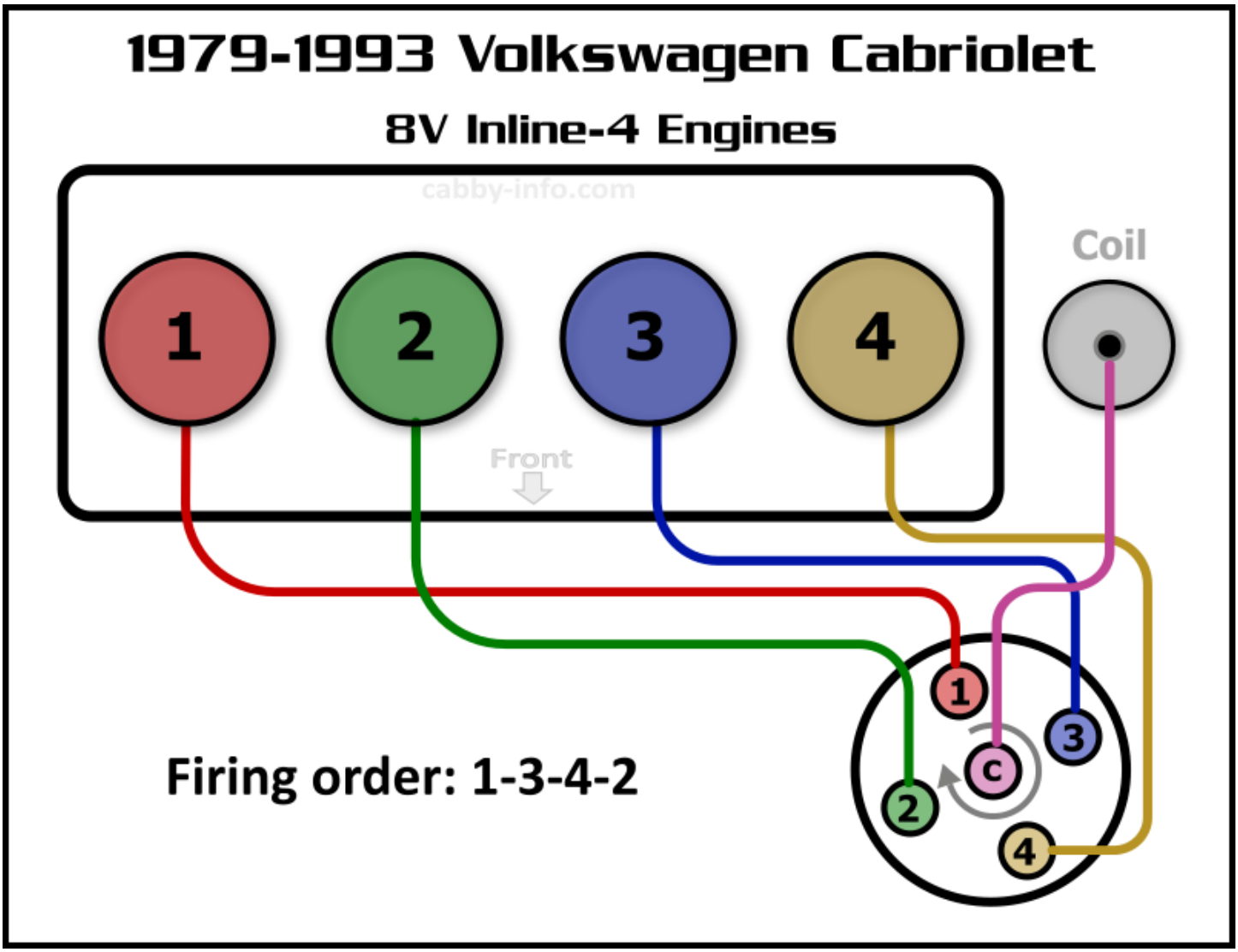
1) The gap to measure is *between the electrodes*, as shown:



2) Spark plug wear is described as follows:
   - ✓ Normal: Plug has gray or light tan color, which indicates proper combustion (see photo below).
   - ✓ Oil-fouled: Plug has wet, oily black deposits caused by excess engine oil getting into the combustion chamber.
   - ✓ Carbon-fouled: Plug has dry, sooty black deposits caused by too much fuel.
   - ✓ Worn out: Plug has correct gray or light tan color, but shows physical deterioration (enlarged gap).



3) Plug wire order:



Replacing the Air Filter

Tools needed:

- Offset screwdriver (or similar tool)
- 10mm wrench
- Socket wrench
- 13mm socket with extension
- Shop-Vac style vacuum &/or damp rag
- Thin, strong rope (optional)

Parts needed:

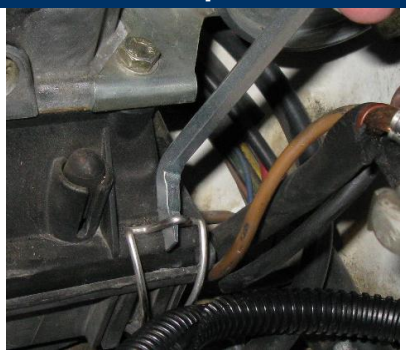
- New air filter:
  - ✓ OEM #049 133 843
  - ✓ Fram #CA 3660
  - ✓ Mahle #LX 259
  - ✓ K&N #33-2002

Step 1

Remove the battery:

- ✓ Using your 10mm wrench, disconnect the negative battery cable, followed by the positive battery cable.
- ✓ Using your socket wrench and 13mm socket, remove the battery hold-down clamp.
- ✓ Remove the battery from the car.

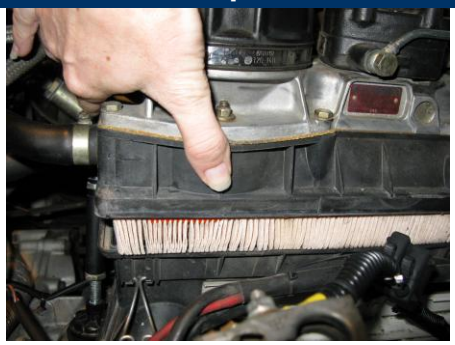
Step 2



Using the offset screwdriver (or similar tool), remove the four clips holding the fuel distributor onto the air box.

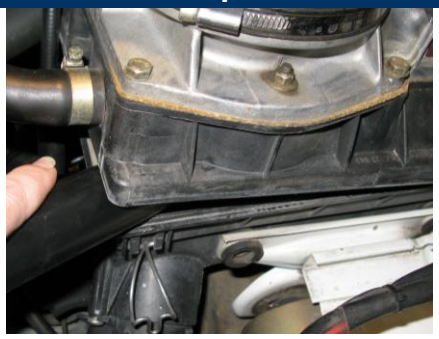
(CIS assembly shown; Digifant is similar.)

Step 3



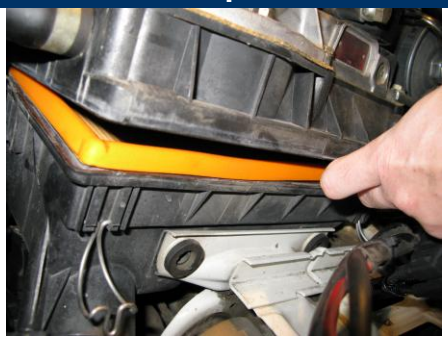
Lift the fuel distributor assembly up and pull out the old air filter. Toss the old air filter into the trash.

Step 4



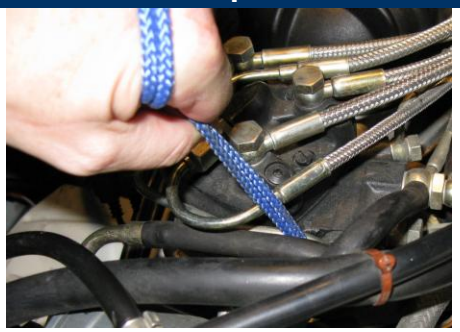
Grab your Shop-Vac, lift up the fuel distributor and vacuum out the air box. If need be, grab a wet rag and wipe down the inside of the air box.

Step 5



- ✓ Lift up the fuel distributor and install the new air filter, with rubber seal on top. Be sure the filter is seated so that no part of it sits outside of the air box.
- ✓ Be sure all electrical and other lines are up and out of the way and place the fuel distributor onto the air filter, ensuring a tight seal.

Step 6



Double-check that everything is fitting correctly and snap the four retaining clips back into position (this may require your offset screwdriver).

The rear retaining clips are more easily reinstalled using rope to pull them into place (as shown above).

Step 7		
Reinstall the battery (installation is reverse of removal).		

Old air filter (top) vs. New air filter (bottom)

Old filter has spots of oil on the top of it; oil is getting sucked past the valve cover screen and into the breather hose. This is normal; however, if the filter is covered with oil, the engine is suffering from blow-by and steps should be taken to remedy the issue.

* * Remember, **you** are responsible for working on **your** car; Cabby-Info.com, KamzKreationz, VAG, VWoA, or anyone else are not responsible if **anything** goes wrong while **you** are working on, in and under **your** car!
Use this information at your own risk!* *